User Manual

(Model#:FM1000Series)

Fingcas Corporation
(www.fingcas.com)

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versione 1.3

1. Direction before Using

1.1 Direction for safety usage

◆ Do not move or reinstall the system arbitrarily.
: In case of arbitrarily moving or installing the system, the system may not work or be broken down due to an electrical shock or inadequate connection. In this case, call the operator.

◆ Do not place the equipment around places where high voltage flows.
: The system may receive electrical effect due to high voltage.

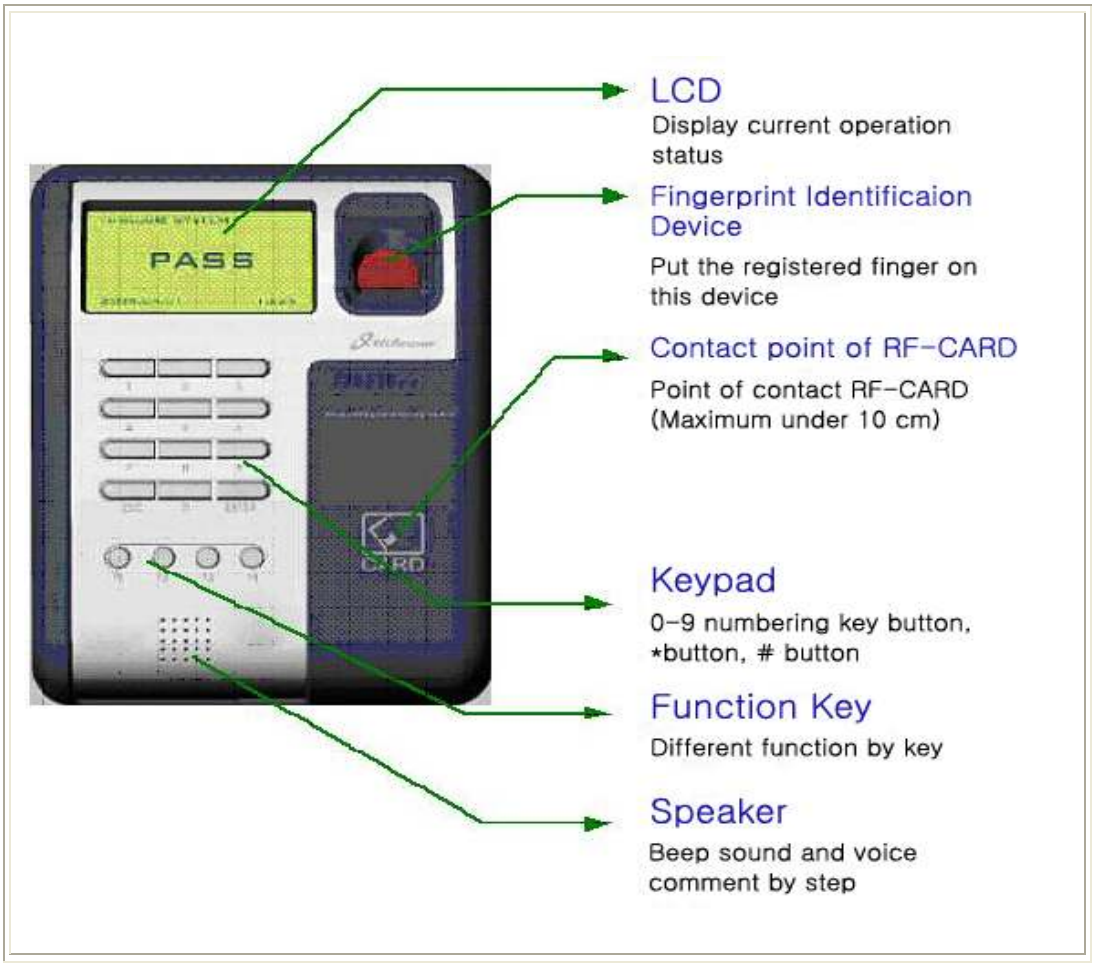
◆ Do not open/close or repair the system arbitrarily.
: This system is a high-precision electronic product. So, it can be damaged if you arbitrarily open/close or repair it. Make sure to call the sales company or operator if needed.

1.2 Product packing and contents

a. Fingerprint Control Unit	1 ea.
b. Connector (11p, 9p, 4p)	3 ea.
c. Screw 2 type	5 ea.
d. CD for User Manuals of ACU/System and PC Software	1 ea.
e. RF Card	2 ea

* Extra-cost Option : AC Power Adapter(DC 12V, 2.5~3A)

1.3 Parts name and function



1.4 Voice comment and Explanation of Key

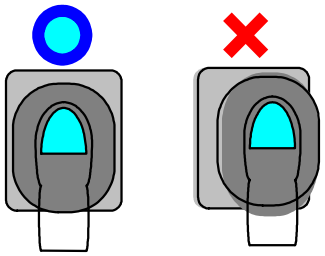
1.4.1 Voice comment

Ok, you can pass	The screen approves entrance and exit
Please contact security manager	The screen doesn't approve entrance and exit
Please enter your fingerprint	The screen requests for fingerprint recognition.
Attendance	The screen is in attendance mode.
Go Out	The screen is in go out mode.
Return Office	The screen is in return office mode.
Leaving Office	The screen is in leaving office mode.

1.4.2 Explanation of Key function

Number(0-9) button	The button is used when keying in a number and selecting a menu.
* BAK button	The button is used when canceling a number.
# ENT button	The button is used when completing the input of a number and entering a fingerprint.
F1 button	The button is used when returning to the previous screen and selecting the attendance mode.
F2 button	The button is used when selecting the go out mode.
F3 button	The button is used when selecting the return office mode.
F4 button	The button is used when selecting the leaving office mode, manager mode and menu.

1.5 Fingerprint identification process



Picture 1

Picture 2

☺ Finger should be kept clean, so that a correct recognition is possible.
☺ If the finger is wet, recognition may be impossible.
☺ Make sure that there is no alien substance on the fingerprint recognizer.
☺ Place the finger correctly at the center of the fingerprint recognizer as shown in <Picture 1>.
☺ All fingerprint should be touching the fingerprint recognizer as shown in <Picture 2>.

2. Password Registration

♧ The manager password is not registered when you open the package box and operate the product for the first time.

New Password Entry [ ] [ ] * Back # Next F1 Cancel F4 OK	1. When the power is on for the first time, a window for setting the manager password will pop up as shown in the left screen.
New Password Entry [*******] [*******] * Back # Next F1 Cancel F4 OK	2. Use the number buttons to enter the manager password (above 5 figures) and press the # button and . Enter the same password (above 5 figures) in the below blank and save it by pressing F4. ◈ If you entered the wrong number, press the button* and reenter the number.
Not Match ! Wrong Password Please try again	◈ If you fail to enter the password with the given time, the screen goes back to its original state.
Password should be typed More than 5 digits Please try again	◈ If you enter a password (below 5 figures), the left-sided screen appears. In this case, please reenter your password (above 5 figures).
OK!! New Password Registered	3. After successfully registering the manager password, the left-sided screen appears.

3. Explanation of LCD Screen

♧ Press F4 for a few seconds from the initial window and enter the administrator password to call the Main Menu.

3.1. Contents of Main Menu

1. Controller Setup: Control the equipment setup.
2. User Management: Add/delete the user or manage the entrance/exit.
3. Passage Method: Setup the door operation method.

3.2 Contents of Controller Setup

♧ Refer to “4. Controller Setup” for the detailed explanation

1. Date/Time: Setup Date and Time of the equipment
2. Network Setup: Setup of Device Number and Network Mode(Serial or LAN)
3. Others: Setup of Voice, LED, Door Open/Close, and Password Change

3.3 Contents of User Management

♧ Refer to “5.User Management” for the detailed explanation

1. User Registration: Register User’s ID, Secret Number, Access Period, Card/Fingerprint
2. User Deletion: Delete User’s registraton
3. User Check: Search User’s ID, Card, and Fingerprint registration

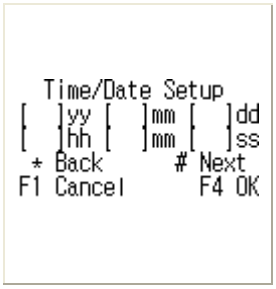
3.4 Contents of Passage Method

♧ Refer to “6.Passage Method” for the detailed explanation.

4. Controller Setup

4.1 Date/Time Setup

Main Menu -> Select “1 Controller Setup” -> Select “1 Date/Time” and set up as below.



You can see a window for setting up the year, date, hour, minute and second as shown in the left-side picture. Enter the year by using a number button. After the 2 figures are entered, the cursor automatically moves to the month blank. After entering both the date and time, press the F4 button to save the registered date and time.

◈ For example, when you input 08, 06, 03, 15, 28 in order to set 15:28 on 03 June 2008. the setup is completed with going back to the previous screen

4.2 Network Setup

4.2.1 ACU Number Setup

Main Menu -> Select “1 Controller Setup” -> Select “2 Network Setup” -> Select “1 ACU Number” -> Input ACU # -> Go back to “Network Setup Menu”.

* In case of establishing ACU by system network. ACU’s Number is not duplicated Until 001-255 not to be, it will be able to give.

4.2.2 Network Mode Setup

4.2.2.1 Serial Communication

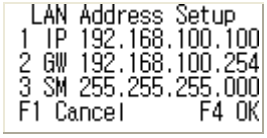
Main Menu -> Select “1 Controller Setup” -> Select “2 Network Setup” -> Select “2 Network Mode” -> Select “1 Serial “ -> press F4 button -> Go back to “Network Setup Menu”

When also it presses F4 and “Network Setup Changed” the screen which is comes out, the initial timely screen appears, Serial communication sets are completed.

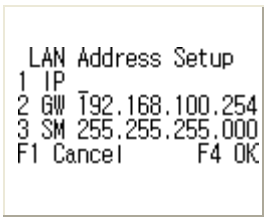
4.2.2.2 LAN Communicaton Setup

Main Menu -> Select “1 Controller Setup” -> Select “2 Network Setup” -> Select “2 Network Mode” -> Select “2 Wire LAN“ -> press F4 button -> Go back to “Network Setup Menu”.

Select the LAN Setup Number to display the LAN Address Setup Screen and set up as below.



1. On the left screen, it needs to be set User PC by LAN communication. Select number “1” to input IP address on control unit.



2 It needs to input same number on 3 packs among 4 packs of User PC, only select different number for the last pack.

◈ For example, a) IP for User PC is 192.156.0.205 in case and IP address of device can be chosen any numbers within 255 except 205, pc IP Address itself like 192.156.0.207. You can input dot(.) in the middle of Numbers by using of # button. b) If you are going to use multi devices to LAN

	communication network, all IP address for the individual device should be set differently. c) GW and SM should be set when User pc is to communic-ate to external pc, it can be found in User pc. d) Setup can be completed by pressing F4 after you input IP numbers etc, then it goes back to previous screen. If you press F4 again, it shows message as "Network Setup Changed" with displaying the original time screen.

4.3 Controller Setup의 Others Setup

4.3.1 Voice/LED Setup

4.3.1.1 Beep ON/OFF

"Main Menu" -> Select "1 Controller Setup" -> Select "3 Others" ->Select "1 Voice/LED Setup" -> Select "1 Beep Setup" -> Select the number whether the Beep Sound is to be ON or OFF and press F4 returning back to previous screen upon completing the selection.

4.3.1.2 Voice Setup

Main Menu -> Select "1 Controller Setup" -> Select "3 Others" -> Select "1 Voice/LED Setup" -> Select "2 Voice Setup" -> Select the desired Voice volume number and press F4 returning back to previous screen upon completing the section.

4.3.1.3 Key LED Setup

Main Menu -> Select "1 Controller Setup" -> Select "3 Others" -> Select "1 Voice/LED Setup" -> Select "3 Key LED Setup" -> Select the desired LED Setup number and press F4 returning back to previous screen upon completing the section.

4.3.2 Door Setup

4.3.2.1 Door Open/Close

Main Menu -> Select "1 Controller Setup" -> Select "3 Others" -> Select "2 Door Setup" -> Select "1 Door Open/Close" -> Select the desired Door Setup number and press F4 returning back to previous screen upon completing the section.

4.3.2.2 Alarm/On Setup

Main Menu -> Select "1 Controller Setup" -> Select "3 Others" -> Select "2 Door Setup" -> Select "2 Alarm/On Setup" -> Press F4 after setting up the Passage Door Opening Time & Alarm Time (when installed with the Alarm Device) in second unit at the [ ] returning back to previous screen upon completing the selection.

◈ Reference

Hold Time : Indicate the duration of door opening time.

Alarm Time : Indicate the time of alarm signaling.

4.3.3 Password Change

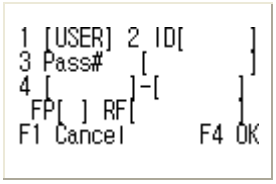
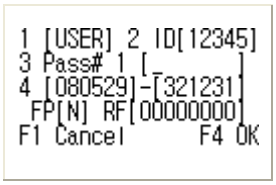
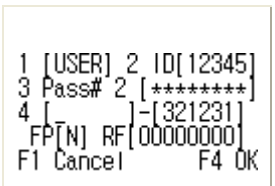
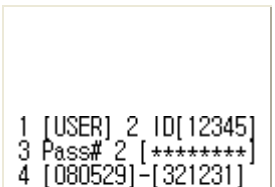
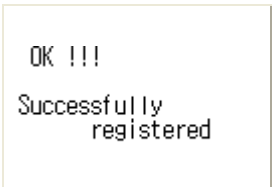
"Main Menu" -> Select "1 Controller Setup" -> Select "3 Others" ->Select "3 Password Change" -> Set up as below.

Password Change [ ] [ ] * Back # Next F1 Cancel F4 OK	If press # button after input new administrator password more than five seat using number key, cursor moves to space below If press F4 button after input correctly inputting administrator password once again, changing administrator's password is completed.

5. User Management

5.1 User Registration

Main Menu -> Select " 2 User Management" -> Select "1 User Registraton".
set up as below.

	1.Every time you pressed number 1, it changes to [USER],[MGR],[EXE]. Select one of them depends on user's types. 2.When you press number 2, it appears cursor on "ID[_]". Input 5 digits of user ID or press # button to terminate 5 digits input just in case you input only 4 digits of numerical numbers.
	3.When you input number 3 after chose number 2 ID number as "12345", it appears the left screen. If you input more than 1 digit of user's password and press #, it changes to Pass #2. 4. Input can be completed by pressing # after you input same number on Pass #2. ◈ Pass# is stand for Password No.
	5.When you press number 4, it appears the left screen. When you input total 6 digits of each 2 numerical digits for year, month and date, it changes to [voluntary 6 digits]- [_]. It can be set the periods of use for user once you input 6 digits in the same way. ◈ If you want to set period of validity for user from May 29, 2008 to December 31, 2032, just input as "[080529-[321231]
	6.When you register one finger print and RF card, it appears the left screen. The red light is turn on the finger print recognizer once you press # button by finger, It's recognized the finger print you want to register on the fingerprint recognizer. Then it changes letter N of "FP[N]" to number once it recognized successfully. 7.If you want to add finger print, press # button repeatedly and touch your finger on the finger print recognizer. It allows up to 10 registrations per user. 8.If you want to register RF card, it will be registered once you proximate RF card to the touch pad of RF card after displayed RF card values.
	9.When you press F4 button, it appears the left screen and storing the information of user. After stored, it goes back to the screen of "user administration" ◈ When you do user registration, the cautious point is user ID that is compulsory. You can register and use by selecting one of three elements, "password" "fingerprint" and "RF card" depend on environment of user.

5.2 User Deletion

Main Menu -> Select "2 User Management" -> Select "2 User Deletion",
set up as below.

5.2.1 User Individual Deletion

Delete ID [ ] FP[ ] RF[ ] Term [-] All Deletion 99999 F1 Cancel F4 OK	1. If you select “2 User Deletion”. it shows as left 2. If input user ID to delete by using number key, user information Appears. If press F4, relevant user information is deleted.
Delete ID? F1 Cancel F4 OK	3. If press F4, it shows as left and if press F4 again, relevant user information is deleted and return to previous screen.

5.2.2 All User Deletion

Delete ID [ ] FP[ ] RF[ ] Term [-] All Deletion 99999 F1 Cancel F4 OK	1. If you select “2 User Deletion”. it shows as left If input numerical button “99999’ and press F4, it shows as below.
Delete All ID? F1 Cancel F4 OK	2. It shows as left screen once you input “99999” by using of numerical keys. Once you press F4, all the stored information of users’ registration will be deleted. Please be cautious on this mode.

5.3 User Check

Main Menu -> Select “2 User Management” -> Select “3 User Check”,
Set up as below.

Check ID [ ] FP[ ] RF [ ] Term [-] ID,FP,RF Choice F1 Cancel F4 OK	If input user ID using number key, relevant user's information is registered. If press # button, can confirm user with fingerprint, and if contact RF card, it is possible also to confirm by card. Can return to previous screen if press F1 or F4.

6. Entrance/Exit Setup

Main Menu -> Select “3 Passage Method”, set up as below.

1 Normal 2 Single 3 Pin# [*] 4 RF Card [*] 5 Fingerprint [*] F1 Cancel F4 OK	1.The left screen shows you can be accessed by selecting one of thos three elements, “password” “finger print” and “RF card”. Every times you press numerical key number 1, it changes mode to “Manager-Executive-Normal” it can be selected by the type of user. ◈ Reference - Normal: it meant general users or normal clients in the company/group. - Manager: It meant middle administrative managers in the company/group. - Executive: It meant chief executive officers in the company/group.
1 Manager 2 Dual 3 Card + Pin [ ] 4 Finger + Pin [*] 5 Card + Finger [*] F1 Cancel F4 OK	2.The left screens shows you how to access by setup two of element, “card And fingerprint” or “finger print and password” by pressing F4 button. It can be set users as Managers level by pressing numerical key number 1 and press the numerical key number 2 in the same way. ◈ Reference 1) The number 2 on the left screen shows you how to select the 3 ways of access (Single, Dual, Triple), it changes mode Single-Dual-Triple once you press number 2 in every time. 2) Single is the meaning that the registered user can be accessed by

	authenticating one of three elements, “password”, “card” or “finger print” Dual mode meant to use two of three elements and Triple meant to use all the three elements in order.
1 Manager 2 Triple Card+Finger+Pin F1 Cancel F4 OK	3.The left screen shows when you press numerical key number 1 at one time and number 2 at twice. Setup can be completed by pressing F4 and can be accessed by pressing in order, card, finger print and password step by step. It goes back to previous screen if you press F1 before pressing F4.

7. Entrance/Exit Method & Time Attendance

7.1 Entrance/Exit Method

7.1.1 User’s Password Use

The mode shall be set up so that the passage is enabled with Password Passage Number

ID/Password Entry User ID [ ] Pass# [ ] * Back * Next F1 Cancel F4 OK	1. When you press first number of the registered user ID on Time screen as the initial screen, it shows you the screen to input user ID and password like the left screen. 2. If you input 5 digits of the registered user ID (press # in case you input less than 5 digits) by using numerical keys, you can input password with scroll down the cursor.
29 May 2008 11:07:34 Thank You	3. When you press F4 after you input user’s password, it goes back to initial screen with opening the door and you can hear guidance sound as “OK You can pass” If you input wrong number, press * button to correct input number.
29 May 2008 11:08:37 No Trespassing	4. In case you input wrong password and did not input password longer than 3 seconds, It shows error message as left.

7.1.2 RF Card Use

♧ Main Menu -> Select “3 Passage Method” to set the Single Mode up at No. 2.
The mode shall be set up so that the passage is enabled with RF Card.
Drawing the registered RF Card close within the 5cm proximity of Card Contact Section to have the device recognize the RF Card and open the Passage Door.
The indication & guide voice message are same as the Password Passage Number operation.

7.1.3 Fingerprint Use

♧ Main Menu -> Select “3 Passage Method” to set up the Single Mode at No.2.
The mode shall be set up so that the passage is enabled with Fingerprint.
Press the # of device to turn the red LED on located at the Fingerprint Input Section and input the fingerprint allowing the device recognize the registered fingerprint.
For upright fingerprint input, refer to the previous pages. The indication & guide voice message are same as the Password Passage Number operation.

7.1.4 RF Card + Password Use

♧ Main Menu -> Select “3 Passage Method” to set up the Dual Mode at No. 2.
The mode shall be set up so that the passage is enabled with RF Card + User’s secret number.

Password Entry [ ] * Back # Next F1 Cancel F4 OK	1. When you proximate the registered card to the touch pad of RF card, it appears the left screen. 2. It's going to be opened the door when you press # or F4 button after input the registered password.
29 May 2008 11:08:37 No Trespassing	3. It shows error message like the left screen if you input wrong password or non-registered card.

7.1.5 RF Card + Fingerprint Use

♧ Main Menu -> Select "3 Passage Method" to set up the Dual Mode at No. 2.

The mode shall be set up so that the passage is enabled with RF Card + Fingerprint.

Please Touch Finger	1. When you proximate the registered card to the touch pad of RF card, it appears the left screen. 2. It's going to be opened the door when you press # or F4 button after input the registered fingerprint.
Password Entry [ ] * Back # Next F1 Cancel F4 OK	3. It shows screen to input password after recognized card in both cases of "Card+ Pin" and "Card+ Finger" when you set the methods of access. In this case, you can input # button without input password.

7.1.6 Fingerprint + Password Use

♧ Main Menu -> Select "3 Passage Method" to set up the Dual Mode at No. 2.

The mode shall be set up so that the passage is enabled with Fingerprint + User's secret number.

Please Touch Finger	1. The red light is turn on when you press # button. 2. Input fingerprint that has been stored in the fingerprint recognizer.
Password Entry [ ] * Back # Next F1 Cancel F4 OK	3. It shows the left screen when you input correct finger print and the door is opened by press # or F4 button after input the registered password.

7.1.7 RF Card + Fingerprint + Password Use

♧ Main Menu -> Select "3 Passage Method" to set up the Triple Mode at No. 2.

The mode shall be set up so that the passage is enabled with RF Card + Fingerprint + User's secret number.

Please Touch Finger	1. When you proximate the registered card to the touch pad of RF card, it appears the left screen. ◈ In case you delay to input password longer than 5 seconds, it goes back to initial screen with hearing guidance sound as "Please Contact Security Manager " and It shows " No Tresspassing" at the screen
Password Entry [ ] * Back # Next F1 Cancel F4 OK	2. It's going to be opened the door when you press # or F4 button after input the registered password.

7.2 Time Attendance Control

7.2.1 Attendance Mode

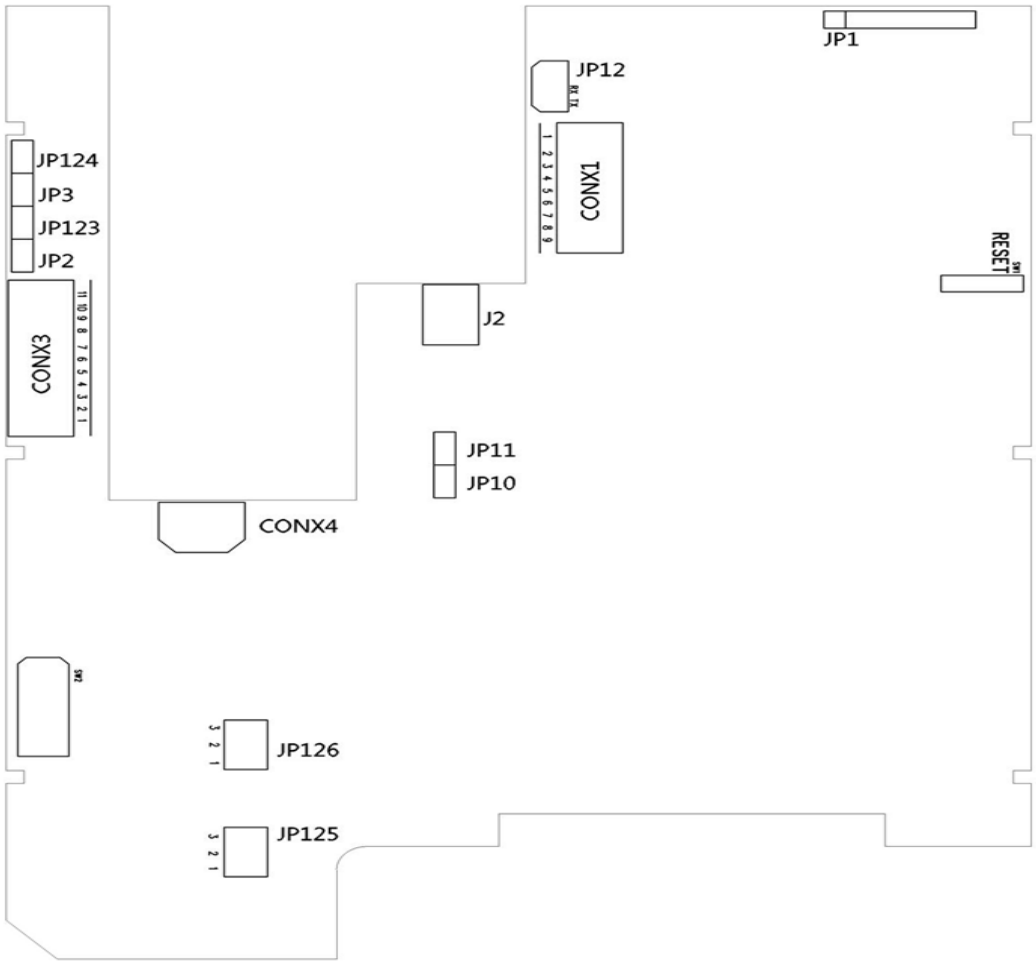
24 May 2008 16:14:28 Attendance	1.Shown on left is the screen displayed when pressing the F1 at the Time Screen. Input the Card, Finger Print or Password according to the selected Certification Method. ◆Note: Execute "F1 -> Password" for Password Attendance Record. For RF Card Attendance Record, execute "F1 -> drawing RF Card close to device", and for Attendance Record with fingerprint, execute the "F1-> Press # -> Fingerprint Recognition" in order.
24 May 2008 16:14:28 No Trespassing	2.Error Message as shown left is to be displayed in the event the incorrect Card, Fingerprint or Password is entered or no Password is entered for over 3 seconds.
24 May 2008 16:14:30 Thank You	3.The screen shown on left is displayed when the Attendance Mode is under Normal operation. ☜ When the fingerprint ONLY registered!! Press F1 Key and # Key to just input the finger print.

7.2.2 Go Out, Return Office and Leaving Office

24 May 2008 16:14:28 Go Out	Shown on left is the screen displayed when pressing the F2 at the Time Screen. Input the Card, Finger Print & Password according to the selected Certification Method. ◈ All the other procedures are identical with the Clause 7.2.1.
24 May 2008 16:14:30 Return Office	Shown on left is the screen displayed when pressing the F3 at the Time Screen. Input the Card, Finger Print & Password according to the selected Certification Method. ◈ All the other procedures are identical with the Clause 7.2.1.
24 May 2008 16:14:28 Leaving Office	Shown on left is the screen displayed when pressing the F4 at the Time Screen. Input the Card, Finger Print & Password according to the selected Certification Method. ◈ All the other procedures are identical with the Clause 7.2.1.

8. Installation and Connection

8.1 Jumping Option Setup

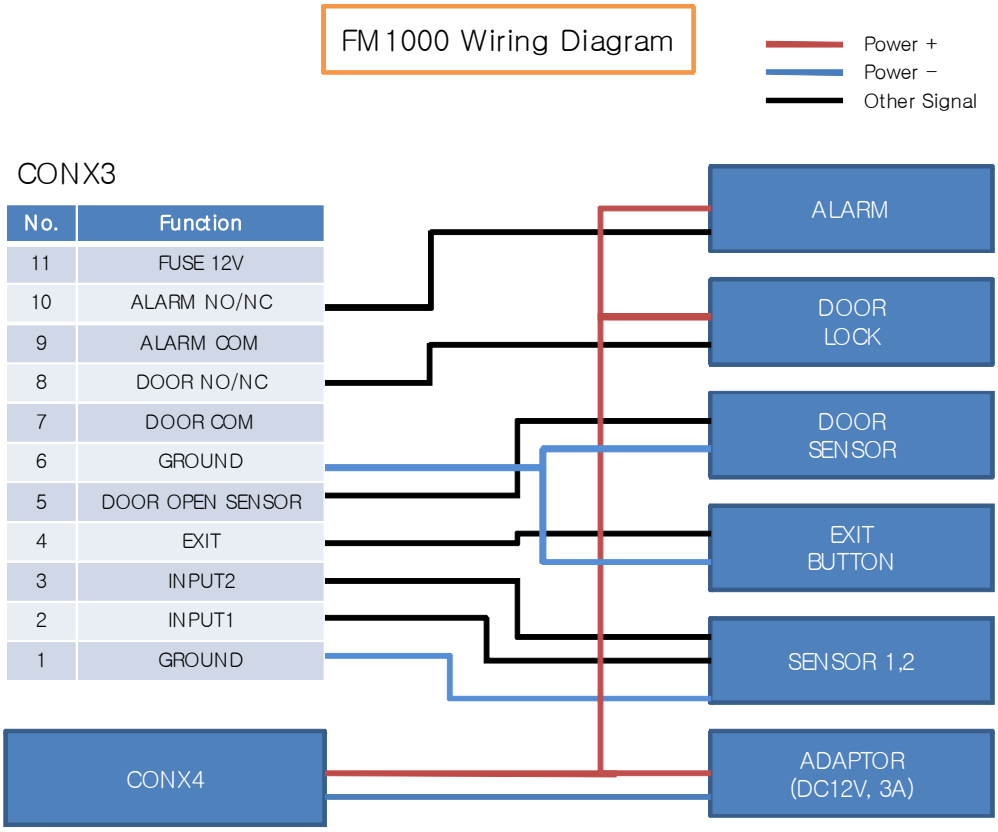


Jumper	Action	Result	Remarks
Jp10, Jp11	Open	422TX Termination Off	
	Close	422TX Termination On	
Jp123	Open	Alarm_COM Open	Decide COM of Alarm whether will open or connect on GND
	Close	Alarm_COM GND	
Jp124	Open	Lock_COM Open	Decide COM of Lock whether will open or connect on GND
	Close	Lock_COM GND	
Jp125	No.1, 2	Alarm_Nc	Decide Nc or Nc connection according to Lock type
	No.2, 3	Alarm_No	
Jp126	No.1, 2	Jumping -Lock_Nc	Decide Nc or Nc connection according to Lock type
	No.2, 3	umping -Lock_No	
Jp3	ON	Pass under Voltage Lock	Counter electromotive force interception that was produced at Lock On/Off
Jp2	ON	Pass under Voltage Alarm	Counter electromotive force interception that was produced at Alarm On/Off

8.2 Installation Method

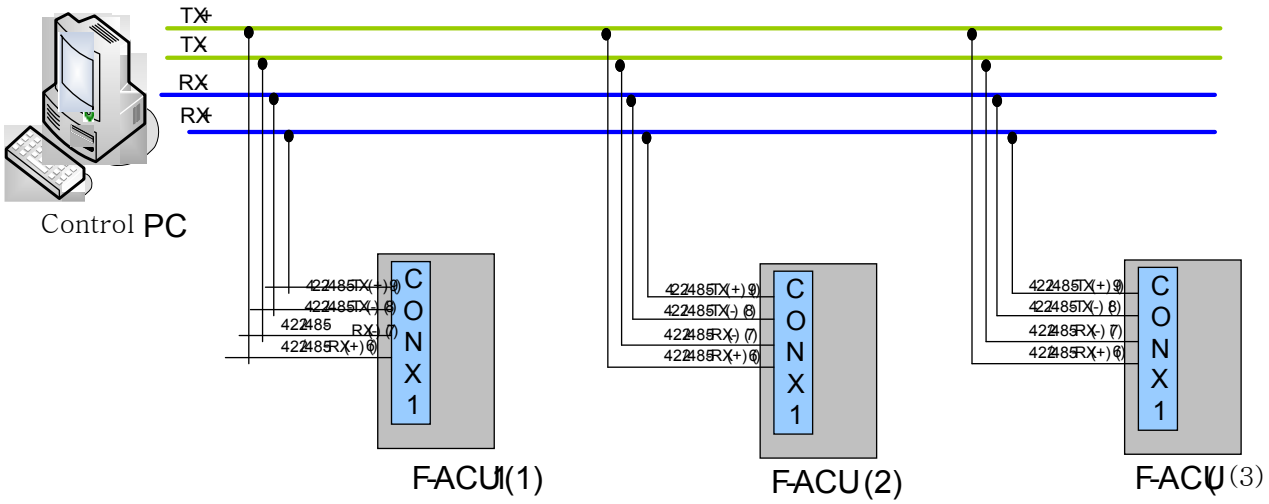
8.2.1 Connection to External Interface

- **Sensor kinds** - #2(Input1), #3(Input2), #1(GND) connection of Conx1 connector
- **Exit button** - Connect with #4(Exit) and GND(#1 or #6) of Conx1 connector
- **Door Lock** - Connect with (Dr _ no/nc) #8 and (Fuse _ 12V) #11 of Conx1 connector and do jumping JP126 according to LOCK type
- **Door open sensor** - Connect with (Dr-Open) #5 and (GND) #6 of Conx1 connector. There is occasion that Lock and Door open sensor are together according to Door.
- **Alram** – Connect with (alarm -no/nc)#10 and (Fuse-12 V) #11 of Conx1. Do jumping JP125 according to alarm type.

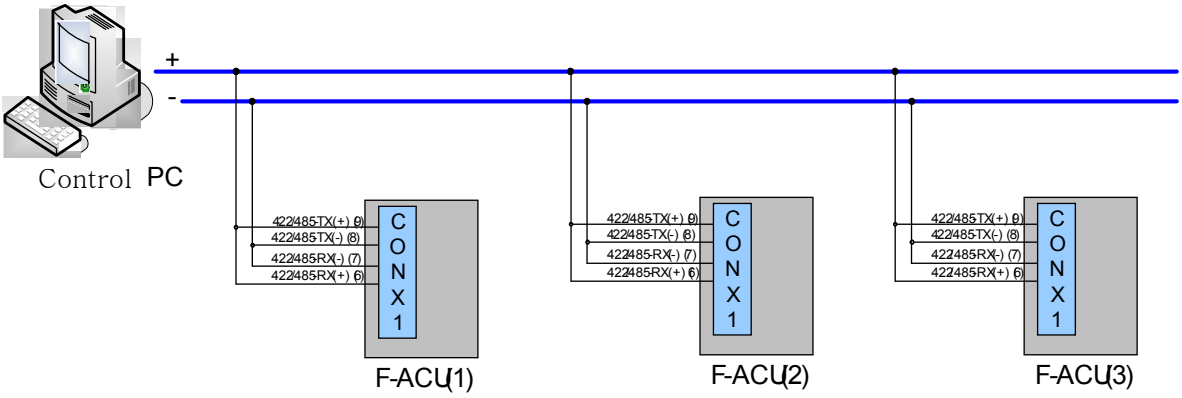


- Select the NO/NC of JP3(ON), JP124(ON) & JP126 depending on the kinds/setting methods of Locks.
- Connect the INPUT1 & INPUT2 in the same manner of EXIT/DOOR Sensor
- Connect the ALARM OUTPUT in the same manner of LOCK, except selecting the NO/NC of JP2(ON), JP123(ON) & JP125 depending on the kinds/setting methods of external devices.

8.2.2 422/485 Multi-drop Connection power and LAN conjunction, re-booting



422 Multi drop Connection



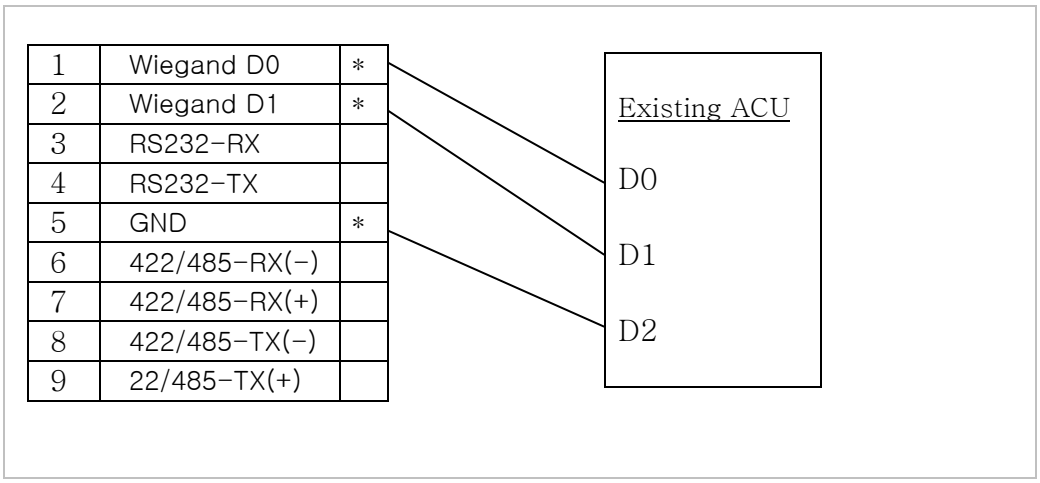
485Multi drop Connection

When it connect to 422/485 port, termination (JP10/JP11) needs to be connected to both ending points depend on the methods of connection. If the case of administrator's PC is one end point and F-ACU is another end point like above figure, administrator's PC is to be terminated and do the termination only at F-ACU(3). Just in case to connect to 485, it needs to be terminated one of JP10/JP11.

8.2.3 Wiegand Connection

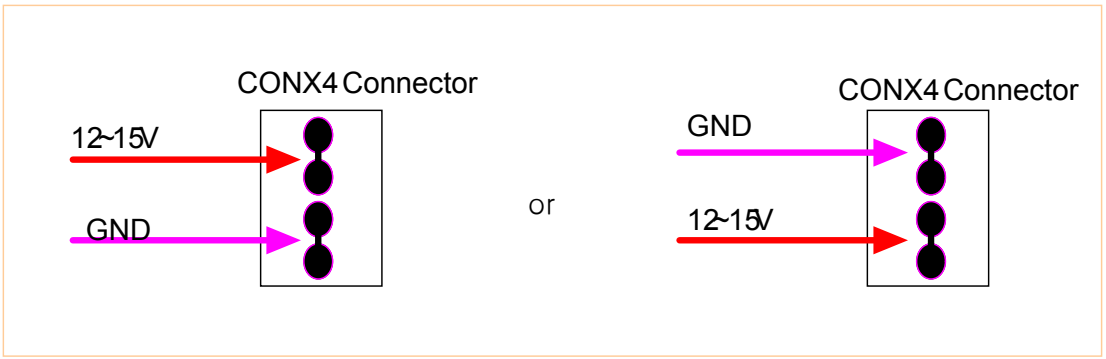
The Wiegand Communication Protocol, an operation method utilizing the existing ACU for substantial Passage Control alternative, specifies to connect the existing terminals of ACU as an input terminal, which the RF Card signal is communicated.

Terminate the corresponding pins of existing ACU at the No. 1,2 & 5.



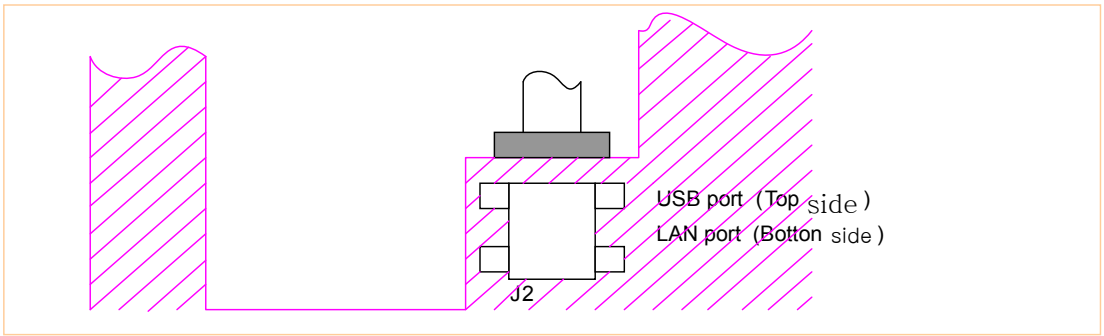
8.2.4 Power Cable Connection

☺ Connect DC power supply 12~15 V to Conx4 regardless of direction



8.2.5 LAN Cable Connection

☺ Connect to RJ-45 connector under J2 port



8.2.6 Rebooting Method ☺ Press RESET switch inside device

8.2.7 Product Initialization

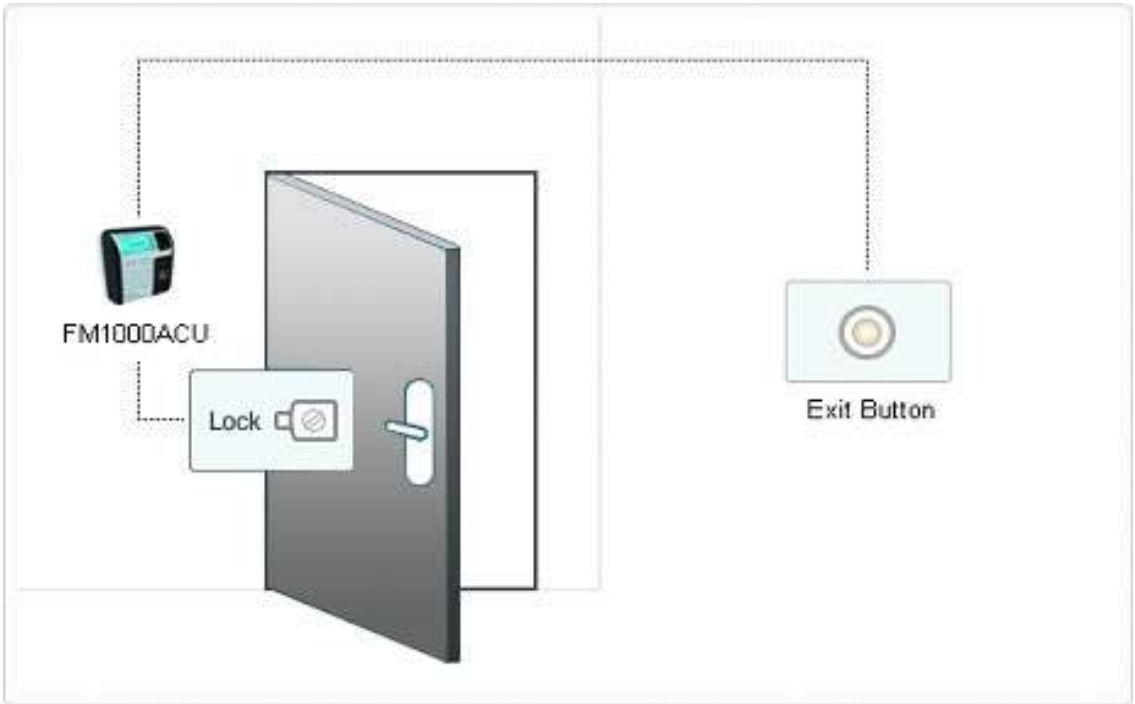
If it does not work normally in various reasons, pull out power connector from main PCB.
Then insert power connector in the status of pressing reset switch.
Once you take off reset button after 3 seconds later, it will be reset as newly receiving status (factory exit mode) by initializing various configurations on the product.

8.3 Product Specification

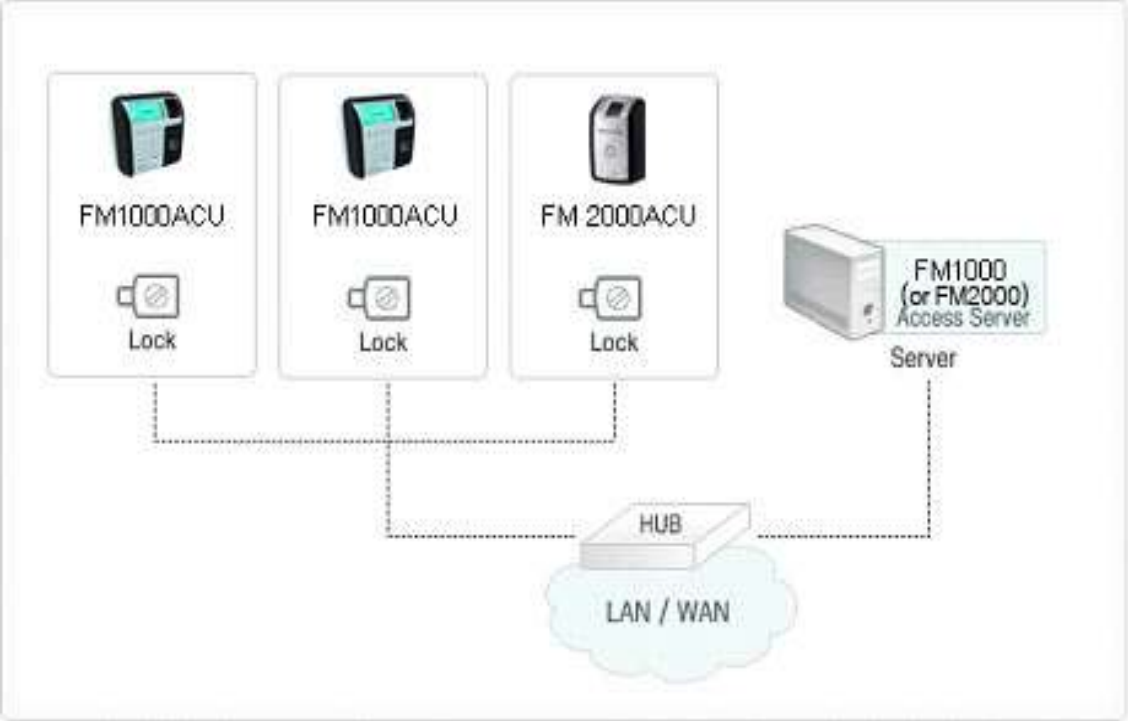
Power Consumption	DC 12 ± 3 V 700 mA
Communication Interface	RS232, RS485/RS422, USB, 10/100 base ethernet
Sensor Type	Optical Sensor
1:1 Verification Time	800 ms
1: 1,000 Identification Time	970 ms
Template Size	256 ~ 384 Bytes (configurable, 384 Bytes default)
Template Capacity	1,900 at 1 MB Flash (option: 9,500 at 4 MB Flash)
RF Card Interface	Max. 65,356 User Register
Event Log	Max. 100,000 Event can Log to Flash Memory (Power Fail Safe)
LCD Display	128 X 64 pixels graphic LCD
Keypad	16 Numeric Fey and 4 Function Key : back lighting
Memory	16MB RAM, 16MB Flash Memory, 2MB boot ROM
CPU	32 Bit RISC CPU
Signal Interface	2 Output (lock, alarm, etc) 4 Input (door/lock status) Wiegand Output
System Software	Access Control and Time & Attendance
Operating Environment	-20 ~ 50°C, Lower than 90% RH(Non-Condensing)
RF Reader	Bulit in 125 KHz RF Reader or 13.56 MHz RF Reader
Dimensions(unit: mm)	125(W) x 163(H) x 48(D)
Weight	430g

9. System Configuration

(Standalone Type)



(Network Type)



10. Others

10.1 Checking Matters before request for A/S

◆ input does not act well or response speed is slow
- Check whether there is moisture in finger
- Check whether Alien substance is on the surface of fingerprint reader
- Check whether fingerprint was input exactly

◆ Fingerprint registration does not act
- Confirm fingerprint registration availability
- Confirm fingerprint registration method
- Confirm state of fingerprint reader

10.2 Terminology explanation

◆ LAN (Local Area Network)

LAN is linked with communication line fewer than 300m, and it means linkage of PC, main frame, workstation. LAN is distance that electric current or radio signal can be passed correctly between computer and LAN is linked high speed communication network established in building of a certain organization so that employees can use computer equipments most effectively

◆ IP address

It is Internet Protocol Address of 32 bits that provided as the concept agreeing with physical network address, on the Internet, to make Routing efficiently

◆ Gateway(GW)

It is a network point that act as entrance which enter other network

◆ Subnet Mask(SM)

Subnet is abbreviated word of "sub-network", it is network that is belonged to certain organization but it means network that can be realized to a part detached apart.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1)This device may not cause harmful interference, and
(2)This device must accept any interference received,
including interference that may cause undesired operation

** CAUTION **

Changes or modifications no expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.